only to subsonic flow, and the engine mount beam is located inboard of the core cowl **44** where it too is isolated from the fan flow stream.

Another feature of the present invention is the placement of nacelle component interfaces at a circumferential location that facilitates convenient engine removal while minimizing stress on the interfaces. Referring to FIG. **3**, the upper and lower intermediate cowl segments **34***a*, **34***b* are approximately 180° sectors so that the interfaces therebetween, **101***a* and **101***b* (visible in FIG. **5**), are each offset approximately 90° from the top of the engine. Aerodynamic forces acting on the lower intermediate cowl segment **34***b* are transmitted around the circumference of the intermediate cowl **34** and impose stress on the axially extending interfaces. The stress increases as the circumferential distance from the point of force application (near the bottom of the intermediate cowl) increases and, for this reason, it is desirable to locate the interfaces as close to the bottom of the intermediate cowl as possible. It is also necessary that an approximately 180° sector be made available for engine removal when the lower intermediate cowl segment is detached from the upper segment. Because the upper and lower intermediate cowl segments of the present invention are each approximately 180° , both the requirement for engine removal and the requirement for minimizing stress on the axially extending interfaces are satisfied. Likewise, the 180° extent of the upper fan cowl **102**, and lower fan cowl **108** of the alternative arrangement (FIG. **6**) provides the same benefits.

Engine removal is accomplished by separating the lower intermediate cowl segment **34***b* from the upper intermediate cowl segment **34***a* and inlet **32**, opening or removing the fan duct outer wall **42** and the core cowl **44**, removing the nose dome **23** (FIG. **1**), and disconnecting the mount links. Removal of the lower intermediate cowl segment opens an approximately 180° sector through which the engine is removed. Depending on the amount of radial clearance between the inner surface of the nacelle and the engine cases (or components mounted thereon) a sector slightly less or more than 180° may suffice. Because the inlet **32** extends 360° , a wing mounted engine, once lowered from the aircraft, must be transported rearward. As shown in FIG. **4**, slight deviations in sector circumferential extent can be incorporated along at least a portion of the axial length of the sectors if desirable. For aircraft where transport to the rear is blocked by components or structure protruding from the aircraft, the alternative arrangement of FIG. **6** can be used. This alternative arrangement, like that of FIG. **3**, isolates the engine from the nacelle aerodynamic force, provides an approximately 180° nacelle sector which can be opened for engine removal, and places the interface between the upper fan cowl **102** and the lower fan cowl **108** in a lightly stressed region of the nacelle. Engine removal is accomplished by detaching the lower fan cowl **108** from the upper fan cowl **102** and proceeding as described above. Once lowered, the engine can be transported forward.

The nacelle and mounting arrangement of the present invention has been described as particularly applicable to ducted fan engines having a bypass ratio greater than 5, and the best mode for carrying out the invention was illustrated in the context of an engine suspended under an aircraft wing. However, the invention is also applicable to engines having a bypass ratio of 5 or less, as well as those mounted in other orientations and from other locations outside the main structure of the aircraft.

We claim:

1. For an aircraft ducted fan engine with a core section bounded by a core case and enclosed within a core cowl, a fan section of larger diameter than said core section secured to and concentric with said core section and bounded by a fan case having a fan duct outer wall downstream thereof, said fan duct outer wall and said core cowl defining an axially extending fan duct terminating at a fan duct discharge plane for conducting a fan flow stream essentially axially, a nacelle and mounting arrangement for mounting said engine on an aircraft, with said aircraft being comprised of a main structure, said nacelle and mounting arrangement comprising:

a pylon secured to said aircraft external to the main structure of said aircraft and adapted for said engine to be secured thereto, said pylon including a pylon beam located radially outward of said fan flow stream and secured to said aircraft and a subpylon extending from said pylon beam across said fan flow stream and terminating in an engine mount beam radially inward of said core cowl, a substantial portion of said subpylon being located within said fan duct forward of said fan duct discharge plane, said nacelle being united with said pylon to define a load path exclusive of said fan case and said core case such that when said nacelle is subjected to a nacelle aerodynamic force substantially all of said nacelle aerodynamic force is transmitted from said nacelle directly to said pylon beam rather than from said nacelle to said pylon beam by way of said fan case, said core case and said subpylon, said pylon beam also transmitting forces and torque acting on said engine to said aircraft and said subpylon being isolated from said nacelle aerodynamic force and transmitting only forces and torque acting on said engine to said pylon beam.

2. The nacelle and mounting arrangement of claim **1** further comprising a pair of circumferentially extending flexible seals spanning between said nacelle and said fan case for accommodating deflection of said nacelle relative to said fan case without conveying a significant portion of said nacelle aerodynamic force into said fan case.

3. The nacelle and mounting arrangement of claim **1**, said engine mount beam being connected to at least an aft link set which transmits only vertical and lateral forces from said engine to said engine mount beam and a forward link set which transmits vertical forces, lateral forces and torque reactions from said engine to said mount beam.

4. The nacelle and mounting arrangement of claim **3** wherein said substantial portion of said subpylon is the entirety of said subpylon.

5. The nacelle and mounting arrangement of claim **3** wherein said pylon beam and said nacelle are united by a separable joint longitudinally outside the region of juncture of said pylon beam and said subpylon.

6. The nacelle and mounting arrangement of claim **3** wherein said pylon beam and said nacelle are integral.

7. The nacelle and mounting arrangement of claim **3** wherein said pylon beam comprises at least two modules separably Joined together at a partitioning joint outside the region of juncture of said pylon beam and said subpylon.

8. The nacelle and mounting arrangement of claim **1**, said nacelle comprising:

an intermediate cowl comprising upper and lower intermediate cowl segments each segment extending circumferentially approximately 180° around said fan case and separably joined along an essentially axial interface, said upper intermediate cowl segment being united with said pylon radially outward of said fan flow stream; and